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Sarcomatoid Transrormation of Chromophobe Renal Cell Carcinoma: a case report

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Abstract
Introduction*: Chromophobe renal cell carcinoma (CRCC) is accounting for 5.9% of all RCC cases and has a better prognosis but chromophobe RCC with sarcomatoid changes a rare entity associated with poor prognosis in most studies. Here, we present a unique case of CRCC with sarcomatoid transformation of a 60 yr old male from Tripura. We report herein the clinical, histological, and immunohistochemical features of a case of sarcomatoid chromophobe renal cell carcinoma* ***.Case Report*** *: A 60 year-old man referred a two-month history of constant left flank pain, and hematuria. After radiological confirmation left radical nephrectomy was performed and specimen was sent for histopathological examination.* ***Result****:Grossly showed a large well circumscribed tumour mass located in the upper pole of the left kidney measuring 10 cm. Microscopically, the tumor was composed of two intermixed distinct morphologic components: a chromophobe renal cell carcinoma and a high-grade spindle cell sarcoma. Immunohistochemical stains show EMA positivity, and Vimentin positivity in the sarcomatoid area.* ***Conclusion****: it is an uncommon tumor and presence of sarcomatoid component in this subtype of RCC has a prognostic value. So our case report is valuable for future research on this rare disease.*

Keywords*: Renal cell carcinoma.*

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I. Introduction

Chromophobe renal cell carcinoma is a rare variant of renal carcinoma, with specific histochemical, ultrastructural, and genetic characteristics[1]. They are relatively uncommon accounting for 5 % of renal cell carcinoma. This subtype of RCC is considered to show a better prognosis than conventional renal clear cell carcinoma. But foci of high-grade spindle cells (sarcomatoid component) can occur and its presence is associated with poor prognosis, with a median survival following diagnosis of less than 1 year reported in most studies[2,3].Here, we present a unique case of CRCC with sarcomatoid transformation of a 60 yr old male from Tripura. We report herein the clinical, histological, and immunohistochemical features of this case.

II. Case Report

A 60-year-old man referred with a two-month history of constant right flank pain, and hematuria. He had a non-contributory medical history. His physical examination was unremarkable. A cystoscopy was performed, showing no alterations. An abdominal computerized tomography revealed a non-homogeneous mass, which measured 10 cm, involving the upper pole of the left kidney. The working diagnosis was renal cell carcinoma. He underwent a left radical nephrectomy. The patient is alive & under treatment presently.

III. Result

The resected right kidney weighed 210g. The tumor was located in the upper pole of the left kidney and measured 10 cm. The tumor is solid to spongy in consistency, having a variegated appearance on cut section. the tumor showed a biphasic appearance, with one area yellowish-white in color, and the other area showed homogeneous aspect with haemorrhage.

Histologically multiple sections studied show renal tissue with tumor cells arranged in solid sheets, trabeculae & nests. Majority of them are highly pleomorhic, round to spindle shaped with many bizarre cells and good number of giant cells. Other type of tumor cells have chromophobe cell pattern.there is evidence of extensive necrosis, hemorrhage, inflammatory infiltrate, focal cartilagenous areas and fibrosis. Perinephric fat is

free of tumor cells. Immunohistochemical stains show EMA positivity, and Vimentin positivity in the focal area.

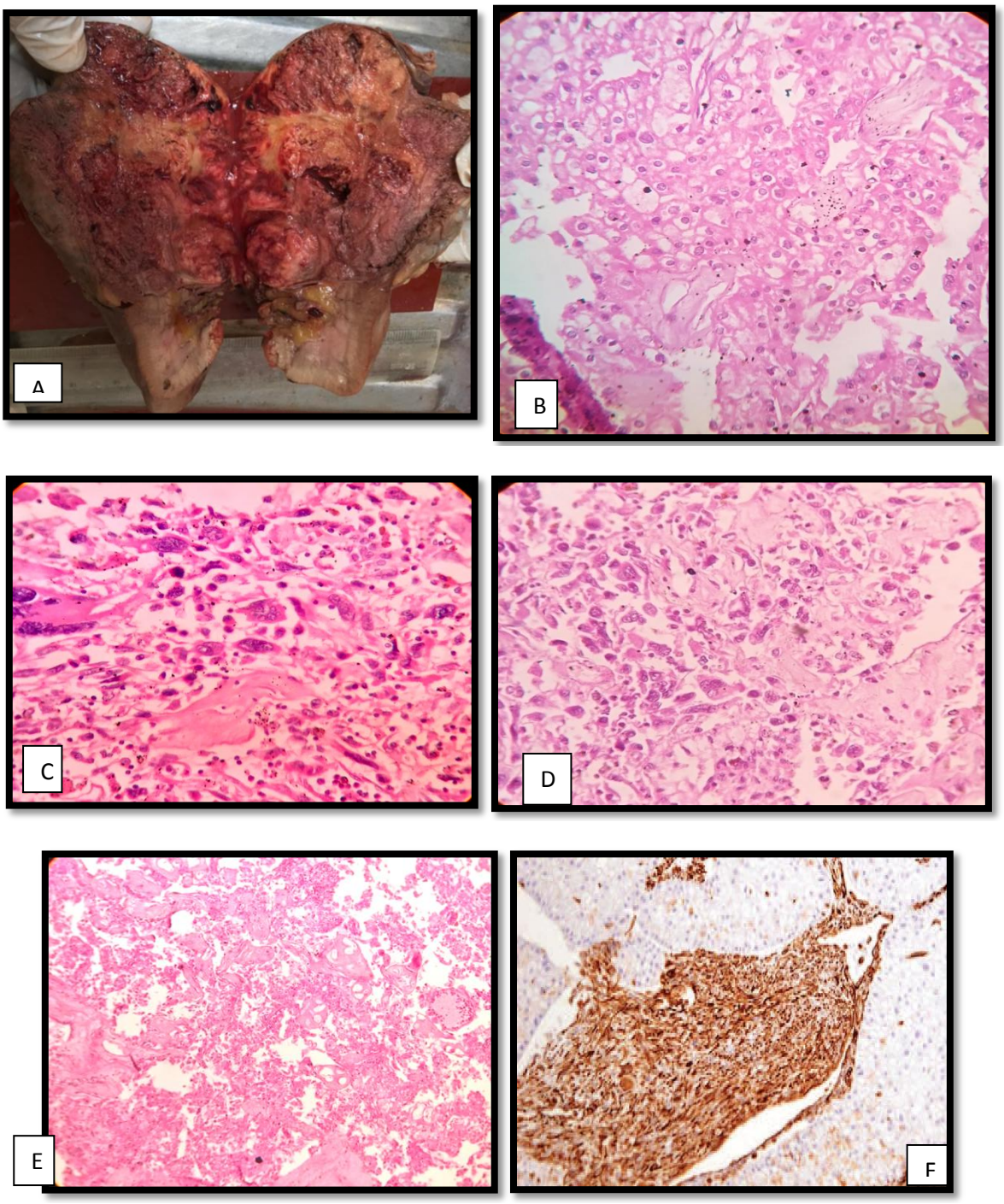

Figure A: Gross image, **Figure B**: Chromophobe pattern of RCC, **Figure C, D, E** : bizarre cells and good number of giant cells & sarcomatoid change. **Figure F:** focal area of vimentin positivity.

IV. Discussion

Although sRCC represents only about 5% of RCCs, as approximately 60–80% of patients present with advanced or late-stage disease[4,5] and it can account for approximately 1 in 6 cases of advanced kidney cancer[6]. The coexistence of both, chromophobe cell carcinoma and sarcomatoid carcinoma, may be due to either dedifferentiation of the more differentiated chromophobe cell tumor or to the collision of two synchronous tumors[7]. It is suggested that sarcomatoid chormophobe RRC is a more aggressive neoplasm compared with

classic chromophobe carcinoma. Additionally, some reports indicate that sarcomatoid change is more common among patients with chromophobe renal cell carcinoma.

V. Conclusion

sRCC is an uncommon renal tumor. As the research on sRCC is limited, the progress in understanding and treatment of these tumors is minimal. and presence of sarcomatoid component in this subtype of RCC has a prognostic value. So our case report is valuable for future research on this rare disease.

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